

LAADS DAAC Migrates to the Cloud: Lessons Learned from Communicating About Earth Science Data on the Cloud

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Level-1 and Atmosphere Archive & Distribution System Distributed Active Archive Center (LAADS DAAC)

What LAADS DAAC?

NASA's Level-1 and Atmosphere Archive and Distribution System Distributed Active Archive Center (LAADS DAAC) primarily archives and distributes data on clouds, water vapor, and aerosols in Earth's atmosphere as well as key instrument data for NASA, NOAA and European Space Administration missions. LAADS DAAC is one of twelve DAACs that are part of the NASA Earthdata group.



Methods

To prepare LAADS DAAC's transition to the Cloud, LAADS DAAC :

1. Researched how other DAACs communicated their transition to the Cloud.
2. Attended presentations regarding best practices in communicating Open Science.
3. Adapted education principles and best practices to educated users on how to access data in the Cloud.

Background

As part of NASA's open-science policy and related goals, the LAADS DAAC is migrating its Level-1 and Atmosphere product collections to the Earthdata Cloud. All these data collections and services remain freely available to the global user community.

To keep data users informed on the progress of LAADS DAAC data migration to the Cloud and educated on how to access LAADS DAAC data, LAADS DAAC created a communications plan that incorporates lessons learned from other institutions, tutorial videos and a central resource with information about LAADS DAAC in the Cloud.



References

Hunzinger, Alexis, *Early Lessons Learned from Supporting End-users' Transition to the Cloud*, LAADS DAAC User Working Group Meeting, November 16, 2022

Laws of UX (n.d.) *Jakob's Law*. Laws of UX. Retrieved December 2, 2022, from <https://lawsofux.com/jakobs-law/>

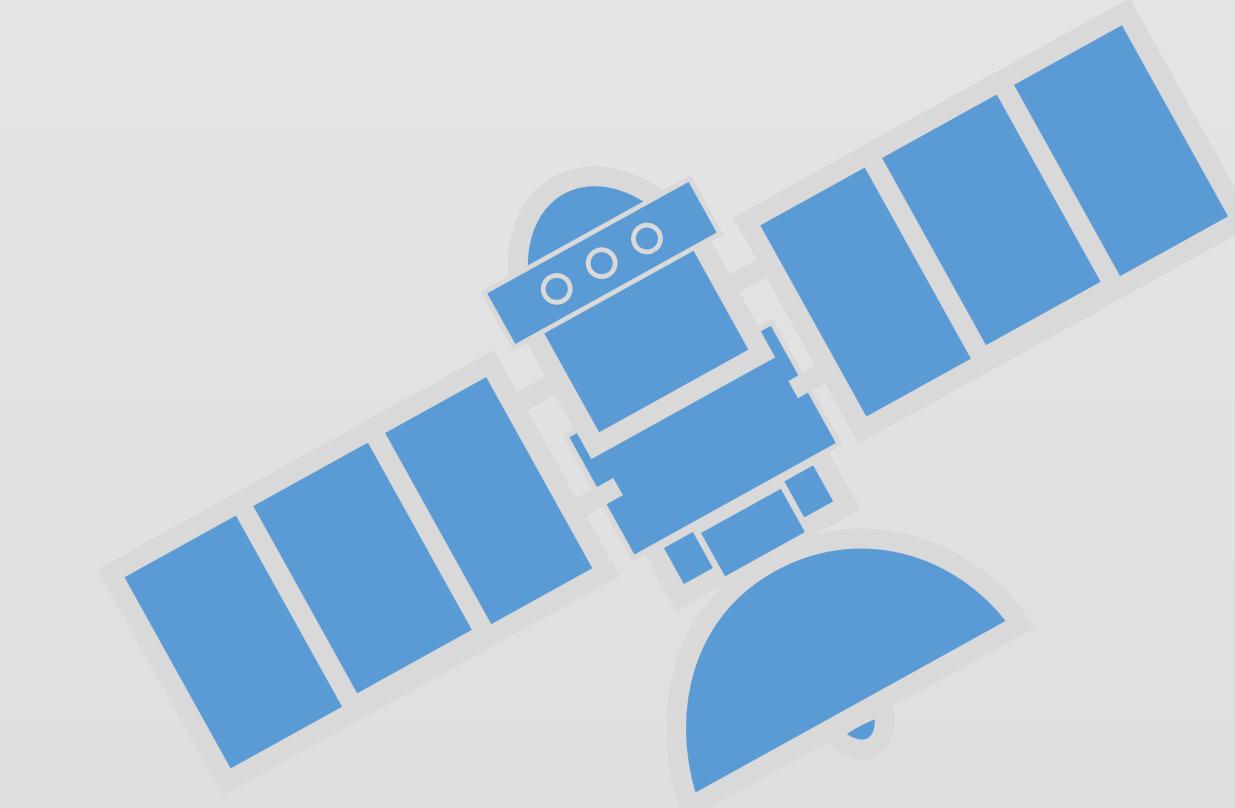
Brecht, H David, *Learning from Online Video Lectures*, Journal of Information Technology Education: Innovations in Practice, Volume 11, 2012.

Research

- NASA's Goddard Earth Science Data and Information Services Center (GES DISC) was formerly under the Global Change Data Center (GSDC) at NASA Goddard until 2022, when GSDC merged with the Terrestrial Information Services Laboratory (TISL). This merger presented the opportunity for LAADS DAAC to create methodology for presenting Cloud migration data in a similar manner to GES DISC. By keeping information consistent our data users find it easier to find information because they are already familiar with how the information is presented on a related site. This upholds Jakob's law of User Experiences (Laws of UX, n.d.).
- Additionally, information presented on early lessons learned from supporting end-users' transition to the Cloud (Hunzinger, 2022), developed with GES DISCS transition to the cloud, acknowledges that new skills are needed by the end-users and therefore, a robust education component must also be part of communications efforts.

Research

- Of the 12 DAACs under the Earthdata group, two have sections devoted to information about the cloud migration, GES DISC and PO.DAAC. ASF also has migrated, but they do not have information about the migration available on the website, presumably because the migration is complete.
- Both GES DISC and PO.DAAC have a top navigation menu item for cloud data.
- GES DISC implemented one page with tags to locations in the page with more information about different topics, including Introduction, Benefits, What's New, What to Expect, Migration Status, GAQ, How-To, Additional Resources, Questions? GES DISC How-To section has short visual guides on How To Obtain the S3 URL for a GES DISC Collection and How to Directly Access MERRA-2 Data from an S3 Bucket with Python from a Cloud Environment.
- PO. DAAC has a main landing page devoted to general information about cloud data.



Phased release of LAADS DAAC data

Data will continue to be accessible on-prem as well as in the Cloud.

